

**SOT89 NPN SILICON PLANAR
MEDIUM POWER TRANSISTOR**

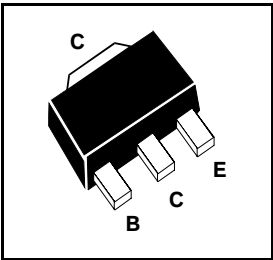
FCX491A

ISSUE 3 - OCTOBER 1995

FEATURES

* 1 Amp continuous current

COMPLEMENTARY TYPE- FCX591A
PARTMARKING DETAILS - N2



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	5	V
Peak Pulse Current	I_C	1	A
Continuous Collector Current	I_{CM}	2	A
Power Dissipation	P_{TOT}	1	W
Operating and Storage Temperature Range	T_j, T_{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	40		V	$I_C=100\mu A$
	$V_{(BR)CEO}$	40		V	$I_C=10mA^*$
	$V_{(BR)EBO}$	5		V	$I_E=100\mu A$
Collector Cut-Off Currents	I_{CBO}		100	nA	$V_{CB}=30V$,
	I_{CES}		100	nA	$V_{CE}=30V$
Emitter Cut-Off Current	I_{EBO}		100	nA	$V_{EB}=4V$
Emitter Saturation Voltages	$V_{CE(sat)}$		0.3 0.5	V V	$I_C=500mA, I_B=50mA^*$ $I_C=1A, I_B=100mA^*$
	$V_{BE(sat)}$		1.1	V	$I_C=1A, I_B=100mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		1.0	V	$I_C=1A, V_{CE}=5V^*$
Static Forward Current Transfer	h_{FE}	300 300 200 35	900		$I_C=1mA, V_{CE}=5V$ $I_C=500mA, V_{CE}=5V^*$ $I_C=1A, V_{CE}=5V^*$ $I_C=2A, V_{CE}=5V^*$
Transitional Frequency	f_T	150		MHz	$I_C=50mA, V_{CE}=10V$ $f=100MHz$
Collector-Base Breakdown Voltage	C_{obo}		10	pF	$V_{CB}=10V f=1MHz$

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤2%
Spice parameter data is available upon request for this device
For typical Characteristics graphs see FMMT491A datasheet